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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2019 Missile Defense Agency	<b>Date:</b> February 2018
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<b>Appropriation/Budget Activity</b>					<b>R-1 Program Element (Number/Name)</b>							
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>					PE 1206895C <i>I Ballistic Missile Defense System Space Programs</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	-	0.000	30.994	16.484	-	16.484	19.555	19.097	17.888	18.236	Continuing	Continuing
MD33: <i>MD Space Exp Center (MDSEC)</i>	-	0.000	30.233	15.745	-	15.745	18.707	18.236	17.055	17.410	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	-	0.000	0.761	0.739	-	0.739	0.848	0.861	0.833	0.826	Continuing	Continuing

**Program MDAP/MAIS Code:** 362

**Note**

In accordance with the 2016 National Defense Authorization Act (NDAA), Section 1601-Major Force Program and Budget for National Security Space Programs, funding for FY2018 and beyond for PE 0603895C is transferred to PE 1206895C. This move aligns funding to the newly established unified major force program for national security space programs to prioritize national security space activities in accordance with the requirements of the Department of Defense (DOD) and national security.

FY 2018 MISSILE DEFEAT AND DEFENSE ENHANCEMENTS (MDDE) BUDGET AMENDMENT: +\$14.000 million is required to address warfighting requirements in support of continued trade studies, system engineering, modeling and simulations, and a prototype design for a potential missile tracking sensor/system.

**A. Mission Description and Budget Item Justification**

This program element primarily funds the Spacebased Kill Assessment (SKA) project, a Missile Defense Agency (MDA) experiment to demonstrate kill assessment from space. MDA experience with intercept testing on the Aegis BMD program provided solid understanding of the physics of kill assessment.

Several events set the stage for the kill assessment experiment that later became known as SKA:

- Section 237 in the FY 2014 National Defense Authorization Act directed MDA to improve kill assessment for the GMD program with an initial kill assessment capability by December 31, 2019
- An MDA study called the Space Layer Option Study found that disaggregated systems could provide sensor capabilities at lower costs
- A once in a decade opportunity became available when the commercial sector offered hosted payload services at costs far below what MDA could expect if it used traditional DOD space acquisition models

One feature of the SKA acquisition plays a crucial role in the execution of the experiment: schedule discipline. Since MDA cannot impact the schedule of the commercial host, maintaining schedule pace is priority #1 on the program. If SKA payloads are delivered late to the commercial host, they miss their opportunity to be launched into space.

SKA incorporates Government Accountability Office (GAO) recommendations to examine the operational feasibility of disaggregating large satellites (report number GAO-15-7) and to provide data for the business case for shared or dedicated satellite control, including the ground antenna networks (report number GAO-13-315). The SKA experiment will utilize a network of small IR sensors integrated onto commercial host satellites which, while on orbit, will observe missile defense intercepts and

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Missile Defense Agency				Date: February 2018		
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 Program Element (Number/Name) PE 1206895C I Ballistic Missile Defense System Space Programs				
deliver a kill assessment declaration to the BMDS. SKA has the opportunity to change the economics of the defense of the American homeland from enemy ballistic missiles.						
This program element also funds engineering trade studies and concept evaluations for current and future space based sensors. The Missile Defense Tracking System (MTS) program will provide the Warfighter with persistent sensor capabilities for detection of ballistic missiles as well as future threats. The goal is to rapidly acquire a satellite tracking system using proven technologies and innovative acquisition approaches and partnerships.						
FY 2018 MISSILE DEFEAT AND DEFENSE ENHANCEMENTS (MDDE) BUDGET AMENDMENT: +\$14.000M is required to address emergency warfighting readiness requirements to ensure readiness of the BMDS.						
+\$14.000M Project MD33 - MD Space Exp Center (MDSEC): required to continued trade studies, system engineering, modeling and simulations, and a prototype design for a potential missile tracking sensor/system. This is a base budget requirement.						
B. Program Change Summary (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget		0.000	16.994	13.348	-	13.348
Current President's Budget		0.000	30.994	16.484	-	16.484
Total Adjustments		0.000	14.000	3.136	-	3.136
• Congressional General Reductions		0.000	0.000			
• Congressional Directed Reductions		0.000	0.000			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		0.000	0.000			
• Congressional Directed Transfers		0.000	0.000			
• Reprogrammings		0.000	0.000			
• SBIR/STTR Transfer		0.000	0.000			
• FY 2017 Request for Additional Appropriations		0.000	0.000	0.000	-	0.000
• Missile Defeat and Defense Enhancement		0.000	14.000	0.000	-	0.000
• Other Adjustment		0.000	0.000	3.136	-	3.136
Change Summary Explanation						
Increase in FY 2019 supports efforts associated with SKA transition to operations						
FY 2018 MISSILE DEFEAT AND DEFENSE ENHANCEMENTS (MDDE) BUDGET AMENDMENT: +\$14.000 million is required to address warfighting requirements in support of continued trade studies, system engineering, modeling and simulations, and a prototype design for a potential missile tracking sensor/ system.						

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 1206895C / Ballistic Missile Defense System Space Programs				Project (Number/Name) MD33 / MD Space Exp Center (MDSEC)			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
MD33: MD Space Exp Center (MDSEC)	-	0.000	30.233	15.745	-	15.745	18.707	18.236	17.055	17.410	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

In accordance with the 2016 National Defense Authorization Act (NDAA), Section 1601-Major Force Program and Budget for National Security Space Programs, funding for FY2018 and beyond for PE 0603895C is transferred to PE 1206895C. This move aligns funding to the newly established unified major force program for national security space programs to prioritize national security space activities in accordance with the requirements of the Department of Defense and national security.

FY 2018 MISSILE DEFEAT AND DEFENSE ENHANCEMENTS (MDDE) BUDGET AMENDMENT: +\$14.000 million is required to address warfighting requirements in support of continued trade studies, system engineering, modeling and simulations, and a prototype design for a potential missile tracking sensor/system.

**A. Mission Description and Budget Item Justification**

The SKA system is composed of two segments: a space segment and a ground segment.

- The space segment is composed of a network of small infrared (IR) sensors (sensors, processor cards and cabling), each mated to a different satellite. The total number of sensors and where they are placed in the network are specifically tailored for the kill assessment mission. The space segment includes key design features to improve its resiliency.
- The ground segment is a small network of desktop computers, servers and routers that monitor the health of the on-orbit sensors, command the sensors to perform the kill assessment mission and analyze the data to make a kill assessment determination for the Ballistic Missile Defense System (BMDS). The ground segment also includes the equipment necessary for communications security and information assurance. The Missile Defense Space Center (MDSC) is the communications hub for SKA data, routing SKA data between the commercial payload integrator and the SKA Payload Analysis Center.

The SKA sensors are hosted on satellites that are not developed by MDA, thus schedule performance is the highest priority of the experiment. Since the launch of the host satellites will not wait for hosted payloads that are delivered late, the management of the SKA project focuses on the ability to meet schedule commitments. In the past year, the commercial satellite host and the launch site owner have made small changes to the launch schedule; however, those changes have not affected SKA delivery commitments to the satellite integrator - the SKA project remains on schedule.

**Missile Defense Tracking System (MTS)**

Similar to the BMDS, a future Missile Defense Layer is composed of a system of systems in space:

- OPIR Global Scanning for alert and characterization (Air Force)
- Regional Staring Sensors for detection, warning and cueing (MDA)
- Narrow Field of View for precision fire control tracking (MDA)
- EO/IR Kill Assessment (MDA)

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency		Date: February 2018		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 1206895C / Ballistic Missile Defense System Space Programs	Project (Number/Name) MD33 / MD Space Exp Center (MDSEC)		
Space provides critical vantage point necessary to address rapidly advancing threats across multiple regions of interest (i.e. trans-regional). The space layer will be a collaboration between MDA and the Air Force to provide a more robust and capable sensor architecture. MTS will be an integral part of a future operational space layer providing a robust and resilient Ballistic Missile Defense sensor architecture and will be designed to detect and track threats using space-based sensing.				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019
Title: Spacebased Kill Assessment		0.000	16.233	15.745
Articles:		-	-	-
Description: The SKA project is an experimental system designed to demonstrate kill assessment for Homeland Defense.				
It includes:				
- SKA sensor-host satellite integration and testing				
- On-orbit operations by experimenting and participating in BMDS flight tests				
- Analysis of operations and test data to inform future decision to add SKA to BMDS operational baseline				
- Development of kill assessment algorithms required to add SKA to the operational BMDS				
- Supporting engineering trade studies and concept evaluations for current and future space based sensors				
Specific and/or unique accomplishments to each FY are as follows:				
FY 2018 Plans:				
- Complete on-orbit deployment, checkout, calibration and commissioning of the sensor network				
- Begin on-orbit operations by experimenting and participating in BMDS flight tests				
- Analyze operations and test data to inform future decision to add SKA to BMDS operational baseline				
- Support concept studies and analyses for assessment sensor payload configurations				
- Begin development of kill assessment algorithms required to add SKA to the operational BMDS				
- Initiate requirements and design of SKA Payload Analysis Center at the MDSC to continue experimental operations				
FY 2019 Plans:				
- Complete on-orbit checkout, calibration and commissioning of the sensor network				
- Begin development of capability for ground test participation required to add SKA to the operational BMDS				
- Begin integration support required to add SKA to the operational BMDS				
- Build out SKA Payload Analysis Center at the MDIOC				
FY 2018 to FY 2019 Increase/Decrease Statement:				
N/A				
Title: Missile Defense Tracking System (MTS)		0.000	14.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Missile Defense Agency			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 1206895C / <i>Ballistic Missile Defense System Space Programs</i>	<b>Project (Number/Name)</b> MD33 / <i>MD Space Exp Center (MDSEC)</i>	

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<p align="right"><b>Articles:</b></p> <p><b>Description:</b> Missile Defense Tracking System (MTS) is a future space-based missile tracking sensor/system concept to address warfighter requirements. The goal of this effort is to develop prototype space sensor concepts to: -Detect and track traditional and emerging threats -Support Theater Missile Warning (TMW)/Theater Missile Defense (TMD) mission -Leverage inherent multi-domain capabilities to provide as capable support to the Overhead Persistent Infrared (OPIR) Enterprise</p> <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p><b>FY 2018 Plans:</b> -Trade studies -System engineering and acquisition strategy -Modeling and simulations -Ground segment design -Prototype concept design</p> <p><b>FY 2019 Plans:</b> N/A</p> <p><b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> N/A</p>	-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	30.233	15.745

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	1,034.861	957.097	926.359	-	926.359	1,046.235	847.537	585.956	572.619	Continuing	Continuing
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	252.665	278.145	220.876	-	220.876	250.238	267.502	263.758	260.273	Continuing	Continuing
• 0603892C: <i>AEGIS BMD</i>	889.489	860.788	767.539	-	767.539	780.085	707.901	693.256	562.748	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Missile Defense Agency										<b>Date:</b> February 2018	
<b>Appropriation/Budget Activity</b> 0400 / 4				<b>R-1 Program Element (Number/Name)</b> PE 1206895C / <i>Ballistic Missile Defense System Space Programs</i>				<b>Project (Number/Name)</b> MD33 / <i>MD Space Exp Center (MDSEC)</i>			
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• 0603896C: <i>Ballistic Missile Defense Command and Control, Battle Management &amp; Communication</i>	465.433	454.862	475.168	-	475.168	515.239	494.873	492.119	515.529	Continuing	Continuing
• 0603904C: <i>Missile Defense Integration and Operations Center (MDIOC)</i>	53.483	53.265	54.925	-	54.925	58.498	57.764	59.020	61.915	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	294.441	316.193	365.681	-	365.681	349.388	320.909	320.332	327.584	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	521.784	460.125	517.852	-	517.852	441.827	383.739	405.909	417.800	Continuing	Continuing
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
<p>SKA leverages experience that the Johns Hopkins University Applied Physics Laboratory (JHU/APL) has with its extensive history of performing kill assessment activities and conducting experiments associated with the Aegis BMD program. JHU/APL is the developer of the SKA experiment and its primary subcontractor will be responsible for payload integration and hosting accommodation using a firm fixed price contract to contain costs. The SKA experiment uses a commercial satellite program as the platform host for a DOD payload, taking full advantage of a multi-billion dollar space and ground system that already exists. Since MDA and JHU/APL cannot impact the launch schedule of the commercial satellite host, fiscal stability and commitment is required which is a small tradeoff for the significant cost savings that commercial hosting provides.</p>											
<b>E. Performance Metrics</b>											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Missile Defense Agency												Date: February 2018			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 1206895C / Ballistic Missile Defense System Space Programs				Project (Number/Name) MD33 / MD Space Exp Center (MDSEC)					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Spacebased Kill Assessment - Development and Experimentation	C/CPFF	JHU/APL : Laurel, MD	0.000	0.000		12.232	Nov 2017	9.447	Nov 2018	-		9.447	Continuing	Continuing	Continuing
Spacebased Kill Assessment - Experimental Ops Team	C/TBD	TBD : Schriever AFB, CO	0.000	0.000		2.677	Nov 2017	1.056	Nov 2018	-		1.056	Continuing	Continuing	Continuing
Spacebased Kill Assessment - MDSC Support	C/TBD	TBD : Schriever AFB, CO	0.000	0.000		0.000		0.744	Nov 2018	-		0.744	Continuing	Continuing	Continuing
Spacebased Kill Assessment - Transition To Ops	C/Various	Various : MDA CO, AL	0.000	0.000		0.000		0.634	Nov 2018	-		0.634	Continuing	Continuing	Continuing
Spacebased Kill Assessment - Transition to Ops (PRIME)	C/CPFF	JHU/APL : Laurel, MD	0.000	0.000		0.000		2.573	Nov 2018	-		2.573	Continuing	Continuing	Continuing
Missile Defense Tracking System (MTS) - Ground Segment	TBD	TBD : CO	0.000	0.000		3.800	Apr 2018	0.000		-		0.000	0.000	3.800	3.800
Missile Defense Tracking System (MTS) - Space Prototype Concept Activity	MIPR	SMC SpEC OTA : Various	0.000	0.000		0.400	Mar 2018	0.000		-		0.000	0.000	0.400	0.400
Subtotal			0.000	0.000		19.109		14.454		-		14.454	Continuing	Continuing	N/A
Remarks All efforts listed above are a continuation of PE 0603895C, MD33															

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2019 Missile Defense Agency												<b>Date:</b> February 2018			
<b>Appropriation/Budget Activity</b> 0400 / 4						<b>R-1 Program Element (Number/Name)</b> PE 1206895C / <i>Ballistic Missile Defense System Space Programs</i>						<b>Project (Number/Name)</b> MD33 / <i>MD Space Exp Center (MDSEC)</i>			
<b>Support (\$ in Millions)</b>				<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Spacebased Kill Assessment - Contract Support Services (CSS)	C/Various	Various : CO, VA	0.000	0.000		0.247	Nov 2017	0.193	Nov 2018	-		0.193	Continuing	Continuing	Continuing
Spacebased Kill Assessment - FFRDC	FFRDC	Various : CO, AL, MD, VA, CA	0.000	0.000		0.684	Nov 2017	0.791	Nov 2018	-		0.791	Continuing	Continuing	Continuing
Spacebased Kill Assessment - IT User Services	C/CPAF	Northrop Grumman : AK, CA, CO, HI, NM, VA	0.000	0.000		0.049	Nov 2017	0.053	Nov 2018	-		0.053	Continuing	Continuing	Continuing
Spacebased Kill Assessment - MDA Civilian	Allot	MDA : VA	0.000	0.000		0.212	Oct 2017	0.217	Oct 2018	-		0.217	Continuing	Continuing	Continuing
Spacebased Kill Assessment - Program Mission Support	C/Various	Various : CO, AL, MD, VA	0.000	0.000		0.132	Nov 2017	0.037	Oct 2018	-		0.037	Continuing	Continuing	Continuing
Missile Defense Tracking System (MTS) - Contract Support Services (CSS)	C/CPFF	Various : CO, AL, VA	0.000	0.000		3.600	Feb 2018	0.000		-		0.000	0.000	3.600	3.600
Missile Defense Tracking System (MTS) - FFRDC	MIPR	Various : CA, CO, NM, VA	0.000	0.000		3.500	Mar 2018	0.000		-		0.000	0.000	3.500	3.500
Missile Defense Tracking System (MTS) - MDA Civilian	Allot	MDA : CO, AL, VA	0.000	0.000		1.150	Feb 2018	0.000		-		0.000	0.000	1.150	1.150
Missile Defense Tracking System (MTS) - Program Mission Support	C/Various	Various : CO, AL, VA	0.000	0.000		0.500	Feb 2018	0.000		-		0.000	0.000	0.500	0.500
Missile Defense Tracking System (MTS) - UARC	C/CPFF	Various : UT, MD	0.000	0.000		1.050	Feb 2018	0.000		-		0.000	0.000	1.050	1.050
<b>Subtotal</b>			0.000	0.000		11.124		1.291		-		1.291	Continuing	Continuing	N/A
<b>Remarks</b> All efforts listed above are a continuation of PE 0603895C, MD33															



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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2019 Missile Defense Agency										<b>Date:</b> February 2018			
<b>Appropriation/Budget Activity</b> 0400 / 4					<b>R-1 Program Element (Number/Name)</b> PE 1206895C / <i>Ballistic Missile Defense System Space Programs</i>					<b>Project (Number/Name)</b> MD33 / <i>MD Space Exp Center (MDSEC)</i>			
	<b>Prior Years</b>	<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	0.000	0.000		30.233		15.745		-		15.745	Continuing	Continuing	N/A
<b>Remarks</b> N/A													

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2019 Missile Defense Agency															<b>Date:</b> February 2018									
<b>Appropriation/Budget Activity</b> 0400 / 4					<b>R-1 Program Element (Number/Name)</b> PE 1206895C / <i>Ballistic Missile Defense System Space Programs</i>										<b>Project (Number/Name)</b> MD33 / <i>MD Space Exp Center (MDSEC)</i>									
Significant Event Complete ▲ Significant Event Planned △					Milestone Decision Complete ★ Milestone Decision Planned ☆					Element Test Complete ◆ Element Test Planned ◇					System Level Test Complete ● System Level Test Planned ○					Complete Activity ◆ Planned Activity ◇				
					FY 2017					FY 2018					FY 2019					FY 2020				
Future System Prototype Design Activity										◇	◇	◇												
SKA Experimentation - 1Q2018-4Q2018										◇	◇	◇	◇											
SKA Launch Campaign										◇	◇	◇												
SKA On-Orbit Check-out										◇	◇	◇	◇											
SKA Experimentation - 1Q2019-4Q2019													◇	◇	◇	◇								
SKA Experimentation - 1Q2020-4Q2020															◇	◇	◇	◇						
SKA Experimentation - 1Q2021-4Q2021																	◇	◇	◇	◇				
SKA Experimentation - 1Q2022-4Q2022																			◇	◇	◇	◇		
SKA Experimentation - 1Q2023-4Q2023																						◇	◇	◇

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Missile Defense Agency			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 1206895C / <i>Ballistic Missile Defense System Space Programs</i>	<b>Project (Number/Name)</b> MD33 / <i>MD Space Exp Center (MDSEC)</i>	

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Future System Prototype Design Activity	2	2018	4	2018
SKA Experimentation - 1Q2018-4Q2018	1	2018	4	2018
SKA Launch Campaign	2	2018	4	2018
SKA On-Orbit Check-out	2	2018	1	2019
SKA Experimentation - 1Q2019-4Q2019	1	2019	4	2019
SKA Experimentation - 1Q2020-4Q2020	1	2020	4	2020
SKA Experimentation - 1Q2021-4Q2021	1	2021	4	2021
SKA Experimentation - 1Q2022-4Q2022	1	2022	4	2022
SKA Experimentation - 1Q2023-4Q2023	1	2023	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Missile Defense Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 1206895C / Ballistic Missile Defense System Space Programs				Project (Number/Name) MD40 / Program-Wide Support			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
MD40: Program-Wide Support	-	0.000	0.761	0.739	-	0.739	0.848	0.861	0.833	0.826	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note Beginning in FY 2018, Program Wide Support (PWS) was proportionately reallocated as a result of the Ballistic Missile Defense System Space Program transfer from 0603895C program element. FY 2019 and out reflects proportional changes as a result of budget changes to this program element.												
A. Mission Description and Budget Item Justification PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes Global Deployment personnel and support performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs includes: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; and similar operating expenses. PWS is allocated on a pro-rata basis and therefore, fluctuates by year based on the adjusted RDT&E profile (which excludes: 0305103C Cyber Security Initiative, 0603274C Special Programs, 0603913C Israeli Cooperative Program and 0901598C Management Headquarters).												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2017	FY 2018	FY 2019	
Title: Program Wide Support  Articles:  Description: N/A  FY 2018 Plans: N/A  FY 2019 Plans: N/A  FY 2018 to FY 2019 Increase/Decrease Statement: N/A									0.000	0.761	0.739	
									-	-	-	
Accomplishments/Planned Programs Subtotals									0.000	0.761	0.739	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Missile Defense Agency		<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 1206895C / <i>Ballistic Missile Defense System Space Programs</i>	<b>Project (Number/Name)</b> MD40 / <i>Program-Wide Support</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>Remarks</b>		
<b>D. Acquisition Strategy</b> N/A		
<b>E. Performance Metrics</b> N/A		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2019 Missile Defense Agency												<b>Date:</b> February 2018		
<b>Appropriation/Budget Activity</b> 0400 / 4						<b>R-1 Program Element (Number/Name)</b> PE 1206895C / <i>Ballistic Missile Defense System Space Programs</i>				<b>Project (Number/Name)</b> MD40 / <i>Program-Wide Support</i>				

  

<b>Support (\$ in Millions)</b>				<b>FY 2017</b>		<b>FY 2018</b>		<b>FY 2019 Base</b>		<b>FY 2019 OCO</b>		<b>FY 2019 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Program Wide Support - Agency Operations Management	C/CPAF	Various : Multi: AL, CA, CO, VA	0.000	0.000		0.015	Dec 2017	0.011	Jul 2019	-		0.011	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various; Multi : AL, CO, VA	0.000	0.000		0.746	Dec 2017	0.728	Apr 2019	-		0.728	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.761		0.739		-		0.739	Continuing	Continuing	N/A

  

<b>Remarks</b> N/A															
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	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	0.000	0.000	0.761	0.739	-	0.739	Continuing	Continuing	N/A

  

<b>Remarks</b> N/A									
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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Missile Defense Agency														Date: February 2018									
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 1206895C / Ballistic Missile Defense System Space Programs								Project (Number/Name) MD40 / Program-Wide Support									
Significant Event Complete ▲		Milestone Decision Complete ★		Element Test Complete ◆		System Level Test Complete ●				Complete Activity ◆													
Significant Event Planned △		Milestone Decision Planned ☆		Element Test Planned ◇		System Level Test Planned ○				Planned Activity ◇													
						FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023					
MD40 Program-Wide Support										◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Missile Defense Agency			Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 1206895C / Ballistic Missile Defense System Space Programs	Project (Number/Name) MD40 / Program-Wide Support	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2018	4	2023